

WHAT IS CLAIMED IS:

1. A wire section for forming a multi-ply fiber web, the wire section comprising:

a belt on which a first fiber ply is
5 formed;

a twin-wire part including a first wire section wire and a second wire section wire defining a gap former;

a forming roll at which the first and
10 second wires define a gap for receiving fiber suspension at the beginning of the gap former; the first and second wires wrapping over and then advancing past the forming roll;

first guide elements for causing the first
15 and second wires to run together for supporting a layer of fiber suspension between the first and second wires and forming a second fiber ply;

a combining section for combining the
20 first and second plies wherein the second ply is above the first ply and for forming the multi-ply fiber web in the combining section;

the twin-wire part being upstream of the
combining section with respect to the running direction of the first belt;

25 after the first and second wires run together to form the second fiber ply, the first and

30

second wires being supported to separate so that the second fiber ply continues supported on the first wire and the first wire with the second ply entering the combining section; second guide elements supporting the first wire as it enters the combining section to orient the first wire at an angle less than 90° with respect to the first belt entering the combining section; and third guide elements for guiding the second wire so as to not enter the combining section.

2. The wire section of claim 1, wherein the belt is guided to advance in a first direction; the first and second wires are guided by the first guide elements to advance in a second direction and the first and second directions aim toward the combining section.

3. The wire section of claim 2, wherein the gap former has a beginning oriented so that the inflow direction of the fiber suspension for forming the second fiber ply is substantially identical to the running direction of the belt.

4. The wire section of claim 2, wherein the angle at which the first wire enters the combining section with respect to the belt is in the range of 60° to 80° .

20. The wire section of claim 12, further comprising a deflection roll along the path of the first and second wires between the forming roll and the couch roll and the first and second wires jointly wrapping around the deflection roll.

21. The wire section of claim 20, further comprising a plurality of foils arrayed along the path of the wires passing the forming roll, the foils having edges which are supported to be compliantly pressed toward the forming roll and against the wires passing the forming roll.

22. The wire section of claim 2, further comprising a suction box at the first wire for aiding in the dewatering of the first wire.

23. The wire section of claim 22, further comprising forming foils positioned at the suction box at the side of the first wire for applying pressure on the first wire.

24. The wire section of claim 23, further comprising further forming foils at the second wire for applying pressure on the second wire.

25. The wire section of claim 24, further comprising a dewatering arrangement disposed on the path of the first wire and the second fiber ply before the combining section.

26. A process for forming a multi-ply fiber web comprising:

moving a belt in a first direction toward a combining section, and forming a first fiber ply on the moving first belt;

forming a second fiber ply on a first wire section wire; advancing the first fiber section wire with the second ply thereon in a second direction toward the combining section;

combining the first fiber ply on the first belt on and with the second fiber ply on the first wire belt in the combining section;

the second fiber ply being formed in a region which, along the first direction of the first belt, lies upstream of the combining section, and running the second fiber ply of the first wire in the second direction into the combining section at an angle of less than 90° with respect to the first belt.

27. The process of claim 26, further comprising forming the second fiber ply in a twin-wire part between the first and a second wire which define a

gap former, moving the first and second wires together in
5 the second direction toward the combining section;

separating the first and second wires
before the combining section; and

retaining the second fiber ply on the first wire before the first wire with the second ply enters the combining section.

28 The process of claim 27, further comprising directing entering suspension into the beginning of the gap former generally in the first direction of the belt.

add B² & C²

add 2